

FIG. 1

BLASTP - alignment of 359\_protein (SEQ ID NO:2) against  
swiss|Q05017|PHLX\_RABIT PHOSPHOLIPASE ADRAB-B PRECURSOR (EC  
3.1.-.-).//:treml|Z12841|OCPPLIP\_1

product: "Phospholipase"; O.cuniculus mRNA for phospholipase.

//:gp|Z12841|1690 product: "Phospholipase"; O.cuniculus mRNA for  
phospholipase.

This hit is scoring at : 0.0 (expectation value)  
Alignment length (overlap) : 1217  
Identities : 77 %  
Scoring matrix : BLOSUM62 (used to infer consensus pattern)  
Database searched : nrdb

Q: 1 EAWNSLLASSRYSEQESFTTVVFQPFYETTPSLHSEDPRLQDSTTLAWHLWNRMMEPAGE  
EAW:SLLASS:Y:QESF.VVFQPFYFYE::S. :P LQD.TTLA .LWNRMMEP.G.  
H: 259 EAWDSLLASSKYNTQESFAVVFQPFYESSLSALLAEPPLQDPTTLALSLWNRMMEPIGR

KDEPLSVKHGRPMKCPSESPLYFSYRNSNYLTRLQKPQDKLGEKSIFLISLCVSFQVRE  
K:EP.S K. :P::CP:QESPLYF:YRNS..LTR::PQ.KL :VRE  
KEEPFSEKERKPLRCPTQESPLYFTYRNSGQLTRVSQPGKL-----EVRE

#### prosite signature

GAEIRCPDKDPSDVTPTSVHRLKPADINVIGALGDSLTAGNGAGSTPGNVLDVLTQYRGL  
G.EIRCPDKDPSD:VPTSVHRLKPADI.VIGA:GDSLTAGNGAGS.PGN:LDVLTQYRGL  
GTEIRCPDKDPSDVSPTSVHRLKPADIKVIGAMGDSLTAGNGAGSQPGNILDVLTQYRGL

SWSVGGDENIGTVTTLANILREFNPSLKGFSVGTGKETSPNAFLNQAVAGGRAEDLPVQA  
SWSVGGD:NI.TVTTLANILREFNPSL:GFSVGTG:ET::AF.NQAVAG.RA:.L QA  
SWSVGGDQNIISTVTTLANILREFNPSLQGFSVGTGRETTSQAFFNQAVAGARADGLIPQA

RRLVDLMKNDTRIHFQEDWKIITLFIGGNDLDCFCNDLVHYSQNFDTNIGKALDILHAE  
:RLV LMKNDTRI:FQEDWKIIT:FIGGNDLDCFCND V.YSPQNFDTNIG.ALDILHAE  
QRLVALMKNDTRINFQEDWKIITVFIGGNDLDCFCNDPVRYSPQNFDTNIGTALDILHAE

VPRAFVNLTVLEIVNLRELYQEKKVYCPMILRSLCPCVLKFDDNSTELATLIEFNKKF  
:PRAFVNLV.VLEI .LRELYQE.KV CPMILRSLCPCVLKFDDNSTE:A:LIE K::  
IPRAFVNLVKLEISKLELYQETKVSCPMILRSLCPCVLKFDDNSTEIASLIETIKEY

QEKTHQLIESGRYDTRDFTVVVQPFENVDMPKTSEGLPDNSFFAPDCFHFSKSHSRA  
QE:T.QLI:SGRYDTR:DFTVV:QPFVE.V:MPKT.:GLPDNSFFAPDCFHFSK:H:.A  
QERTQQLIDSGRYDTRDDFTVVLQPFVEKVNMPKTQDGLPDNSFFAPDCFHFSKAAAAHA

ASALWNNMLEPVGQKTTRHKFENKINITCPNQFFWSLSTLRFWDLFYALRGHGTWLPGRD  
ASALWNNMLEPVGQKT::FE::NITCPNQ.: LST.: :G.GTWLPGRD  
ASALWNNMLEPVGQKTTHNDFEGAVNITCPNQVWPFLSTYK-----NSVQGFGTWLPGRD

#### prosite signature

RAPSALHPTSVHALRPADIQVVAALGDSLTAGNGIGSKPDDLDPVTTQYRGLSYSAGGDG  
R:PSA PTVHALRPADIQVVAALGDSLTAG GIGSKP:DL.D TTQYRGLSYS:GGDG  
RSPSASPPTSVHALRPADIQVVAALGDSLTAGIGIGSKPNDLSDGTTQYRGLSYSAGGDG

SLENVTTLPNILREFNRNLTYAVGTGDANDTNAFLNQAVPGAKAEDLMSQVQTLQMCKM  
SL:NVTTLNPNILR:FN.NL.G:AVGTGDA:.TNAF.NQAVPGAKA.DLMSQVQTL:Q:MK  
SLDNVTTLNPNILRQFNSNLMGFAVGTGDASGTNAFFNQAVPGAKARDLMSQVQTLVQRMK

50233445.101000

DDHRVNFHEDWKVITV LIGGSDLCDYCTDSNL YSAANFVHHLRNALDVLHREVPRLVNL  
DDHRVNF.EDWKVITV IG.SLCDYCTDSNL YSAANF..HLR:ALD.LHREVPRLVNL  
DDHRVNFQEDWKVITVQIGASDLCDYCTDSNL YSAANFYDHLRDALDALHREVPRALVNL

VDFLNPTIMRQVFLGNPDKCPVQQASVLCNCVLTLENSQELARLEAFSRA YRSSMREL V  
VDF:NP::RQVFLGNPDKCPVQQAS.LCNCVL: RENS.ELARLEA.:AY:SS:REL V  
VDFMNPVSVTRQVFLGNPDKCPVQQASALCNCVLSPRENSYELARLEALAQAYQSSSLREL V

SGSGRYDTQEDFSVVLQPPFFQNIQLPVLADGLPDTSFAPDCIHPNQKFHSQLARALWTNM  
SGRYDT:EDFSVVLQPPF.:IQLPVL.DG DTSFAPDC:HPNQKFHSQ:RALW.NM  
ESGRYDTREDFSVVLQPPFFHSIQLPVLQDGRDLTSTFAPDCVHPNQKFHSQSLSRALWRNM

LEPLGSKTETLDLRAEMPITCPTQNEPFLRTPRNSNYTYPIKPAIENWGSDFLCTEWKAS  
LEPLG.KT:.LDL.A...:TCPTQNEPFLRT RNS:YTYT :PA:ENWGSDFLCT.W.AS  
LEPLGGKTDALDLTAAITLTCPTQNEPFLRTRFRNSDYTPSRPAVENWGSDFLCTAWNAS

NSVPTSVHQLRPADIKVVAALGDSLTVSMGARPNNSSDLPTSWRGLSWSIGGDGNLETHT  
..VP.SVH:L:P.DIKVVAALGDSLT::MGARP:NSSD P. WRGLSWSIGGDG LETHT  
RGVPNSVHELQPGDIKVVAALGDSLTLAMGARPSNSSDPPMFWRGLSWSIGGDGALETHT

TLPNIIKKFNPYLLGFSTSTWEGTAGLNVAEGARARMPAQAWDLVERMKNSPDINLEK  
TLPNIIKKFNFP :LGFST.T EGT.GLNVA.:GARA:DMPAQA DLVERM:NSP:I:LEK  
TLPNIIKKFNPSILGFSTGTLEGTMGLNVAVQGARAQDMPAQARDLVERMRNSPEIDLEK

DWKLVTLFVIGVNDLCHYCENPEAHLATEYVQHIQQALDILSEELPRAFVNVVEVMELASL  
DWKLVTLF:G NDLCH:CENPE.. . EYVQHIQQALD:L EELPR.FVNVVEVMELA.L  
DWKLVTLFVGGNDLCHFCENPEGSSGEYVQHIQQALDVLYEELPRTFVNVVEVMELAGL

YQGGGKCA-MLAAQMNCTCLRHSQS SLEKQELKKVNWNLQHGISSFSYWHQYQTQREDFA  
:Q.QGG:CA :LAAQ::CTC.:SQSS:E.QELKKVNWNLQ.G:S..SY HQY.QREDFA  
HQDQGGRCATLLAAQSHCTCFKYSQSSVEMQELKKVNWNLQSGLSRLSYSHQYVQREDFA

VVVQPPFFQNTLTPLNERGDTDLTFFSEDCFHFSDRGHAEMAIALWNNMLEPVGRKTTSSNN  
VVVQPPFFQNTL.PLN RGD TDLTFFS:DCFHFS:RGHAEMAIALWNNMLEPVG.KTTSSNN  
VVVQPPFFQNTLVPLNGRGDTDLTFFSDDCFHFSERGHAEMAIALWNNMLEPVGHKTTSSNN

FTHSRAKLKCPSPESPYLYTLRNSRLLPDQAEAEVLYWAVPVAAGVGLVVGII GTVVW  
FT:SR.KLKCPSP:SPYLYTLRNSRLLPDQAE. P.VLYWAVPVAAG.GL::GI::V.  
FTYSRTKLKCPSPDSPYLYTLRNSRLLPDQAEADPTVLYWAVPVAAGAGLLIGILAMVAG

```
RCRRGGRREDPPMSLRT      1216
R .R   REDPP:SL.T
RGMRCRPREDPPLSLST      1456
```

**Ser** is the active site.

Transmembrane segment:

From 1176 to 1198: length= 23,

1176 VLYWAVPVAA GVGLVVGIIIG TVV

FIG. 2.

Prosite search result

Access#	From->To	Name	Doc#
PS00016	1096->1099	RGD	PDOC00016
PS01098	150->161	LIPASE_GDSL_SER	PDOC00842
PS01098	502->513	LIPASE_GDSL_SER	PDOC00842

60233445 101000

FIG. 3.

HMMPFAM - alignment of 359\_protein (SEQ ID NO:3) against  
pfam|hmm|Lipase\_GDSL Lipase/Acylhydrolase with GDSL-like m

This hit is scoring at : 168.6 Expect: 1e-46

Scoring matrix : BLOSUM62 (used to infer consensus pattern)

Q: 149 VIGALGDSLTAGNGAGSTPGNVLDVLTQYRGLSWSVGGDENIGTVTTLANILREFNPSLK  
: ALGDSLT G.G GS.. : D ..QYRGLS S GD N... T.L.:IL.:  
H: 1 kvvalGDSLtdggngsestklkdnyrqyrglspssvgdgnfsngtvlpdilakalgikl

G-----FSVGTGKETSPNAFLNQAVAGGRAEDLPVQARRLVD-----LMKNDT  
G F.VG. :E... LN AV.G..AEDL :. .L:D M...  
gVgikeksilfrvgklqengsltglNfAvgGataedllkrlpnlldqvikksqykmygks

RIHFQEDWKIITLFIGGNDLCDFCND 277  
R . Q:D :::T: :GGNDLCD: .D  
rkksqkdpdlvtielGgNDlcdyfrd 146

6033445.103000



FIG. 5

HMMPFAM - alignment of 359\_protein (SEQ ID NO:2) against  
pfam|hmm|Lipase\_GDSL Lipase/Acylhydrolase with GDSL-like m

This hit is scoring at : 155.2 Expect: 1.1e-42

Scoring matrix : BLOSUM62 (used to infer consensus pattern)

Q: 857 VVAALGDSLTVSMGARPNN--SSDLPTSWRGLSWSIGGDGNLETHHTLPNLIKKNPYLL  
V.ALGDSL.T.G...D...:RGLS.S.GDGN...T.LP:IL.K.L  
H: 1 kvvalGDSLtdggngsestklkdnyrqyrglspssvgdgnfsngtvlpdilakalgikl

G-----FSTSTWEGTAGLNVAAREGARARDMPAQAWDLVE-----RMKNSP  
G.....GLN.A.GA.A.D:...:L:::M...  
gVgikeysilfrvgklqengsltglnfAvgGataedllkrlnlldqvikksgykmygks

DINLEKDWKLVTLFIGVNDLCHYCEN 980  
. :KD.LVT: :G NDLC.Y. :  
rkksqkdpdlvtielGgNDlcdyfrd 146

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# SEQUENCE LISTING

SEQ ID NO:1

gaagcctgga acagcctcct ggcctccagc aggtacagtg agcaggagtc cttcacctg  
gttttccagc ctttcttcta tgagaccacc ccatctctac actcggagga cccccgactc  
caggattcta ccacgctggc ctggcatctc tggaatagga tgatggagcc agcaggagag  
aaagatgagc cattgagtgt aaaacacggg aggccaatga agtgtccctc tcaggagagc  
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gttctcggg catttgtgaa cctggtgacg gtgcttgaga tcgtcaacct gagggagctg  
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caggagaaga cccaccaact gattgagagt gggcgatatg acacaaggga agattttact  
gtggttgtgc agccgttctt tgaaaacgtg gacatgcaa agacctcgga aggattgcct  
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60233445.301000

tccctggaga atgtgaccac cttacctaata atccttcggg agtttaacag aaacctcaca  
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cccggagcaa aggctgagga tcttatgagc caagtccaaa ctctgatgca gaagatgaaa  
gatgatcata gagtaaattt ccatgaagac tggaagggtca tcacagtgtc gatcggagggc  
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ccagtgcagc aggccagcgt tttgtgtaac tgcgttctga ccctgcggga gaactcccaa  
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aacatccagc tccctgtcct ggcggtggg ctcccagata cgtccttctt tgccccagac  
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cttgaaccac ttggaagcaa aacagagacc ctggacctga gagcagagat gcccatcacc  
tgtccactc agaattgagc cttcctgaga acccctcgga atagtaacta cacgtacccc  
atcaagccag ccattgagaa ctggggcagt gacttctgt gtacagagtg gaaggcttcc  
aatagtgttc caacctctgt ccaccagctc cgaccagcag acatcaaagt ggtggccgcc  
ctgggtgact ctctgactgt gagtatggga gctcgaccaa acaactccag tgacctaccc  
acatcttgga ggggactctc ttggagcatt ggaggggatg ggaacttgga gactcacacc  
acactgcccc acattctgaa gaagttcaac ccttacctcc ttggcttctc taccagcacc  
tgaggaggga cagcaggact aaatgtggca gcggaagggg ccagagctag ggacatgcc  
gccaggcct gggacctggt agagcgaatg aaaaacagcc ccgacatcaa cctggagaaa  
gactggaagc tggtcacact cttcattggg gtcaacgact tgtgtcatta ctgtgagaat  
ccggaggccc acttgccac ggaatatgtt cagcacatcc aacaggccct ggacatcctc  
tctgaggagc tccaagggc ttctgtcaac gtggtggagg tcatggagct ggctagcctg  
taccagggcc aaggcgggaa atgtgccatg ctggcagctc agaacaactg cacttgccctc

SEQ ID NO:2

EAWNSLLASS RYSEQESFTV VFQPFYETT PSLHSEDPR L QDSTTLAWHL WNRMMEPAGE  
KDEPLSVKHG RPMKCPSQES PYLFSYRNSN YLTRLQKPQD KLGEKSIFLI SLCVSFQVRE  
GAEIRCPDKD PSDTVPTSVH RLKPADINVI GALGDSLTA NGAGSTPGNV LDVLTQYRGL  
SWSVGGDENI GTVTTLANIL REFNP SLKGF SVGTGKETSP NAFLNQAVAG GRAEDLPVQA





HAAHASALWN NMLEPVGQKT THNDFEGAVN ITCPNQVWPF LSTYKNSVQG FGTWLPDRDR  
 SPSASPPTSV HALRPADIQV VAALGDSLTA GIGIGSKPND LSDGTTQYRG LSYSSGGDGS  
 LDNVTTLPNI LRQFNSNLMG FAVGTGDASG TNAFFNQAVP GAKARDLMSQ VQTLVQRMKD  
 DHRVNFQEDW KVITVQIGAS DLCDYCTDSN LYSAAIFYDH LRDALDALHR EVPRALVNLV  
 DFMNPSVTRQ VFLGNPDKCP VQQASALCNC VLSPRENSYE LARLEALAQA YQSSLRELVE  
 SGRYDTREDF SVVLQPFHFS IQLPVLQDGR LDTSFFAPDC VHPNQKFHSQ LSRALWRNML  
 EPLGGKTDAL DLTAAILTLC PTQNEPFLRT FRNSDYTYPY RPAVENWGS DFLCTAWNAR  
 GVPNSVHELQ PGDIKVVAAL GDSLTLAMGA RPSNSSDPPM FWRGLSWSIG GDGALETHTT  
 LPNILLKKNP SILGFSTGTL EGTMGMLNAV QGARAQDMPA QARDLVERMR NSPEIDLEKD  
 WKLVTLFVGG NDLCHFENP EGSSEGEYVQ HIQQALDVLY BELPRTFVNV VEVMEAGLH  
 QDQGGRCATL LAAQSHCTCF KYSQSSVEMQ ELKKVNWNLQ SGLSRLSYSH QYVQREDFAV  
 VVQPFQNTL VPLNGRGD TD LTFSDDCFH FSERGHAEMA IALWNNMLEP VGHKTTNNF  
 TYSRTKLKCP SPDSPYLYTL RNSRLLPDQA EADPTVLYWA VPVAAGAGLL IGILAMVAGR  
 GMRCRPREDP PLSLSTGL

SEQ ID NO:4  
 embl|AA418082|HS1213495 . (EST)  
 TAAAATAGCTTTGGACTTTATTTAAATGTATCCATTCAGGAGCATAGGCCTGGAAGAAG  
 CCCAGGCCCAAGAAGTTGTGACTGTCCCCTGGGCTTCCTATGGCACCAGGCATTGAAGC  
 ATGTCCTGGTGGCCGGGAGTGGCTGGGGCAGAGGGCAGTGAAGAGGGTGGCTATAGGGAG  
 TTTAGGGTGAGGACCCACCCCGGGCCTAGAGGGCACCAGTGCAGGCTCATTGGAGGA  
 TCTTCCCTCCGCCCACCTCTCCTGCACCTCCAGACCACTGTCCCAGTATGATGCCACCACA  
 AGGCCGACTCCCGCTGCCACTGGGACAGCCAGTAGAGCACCTCGGGGGCTTCTTCAGCC  
 TGGTCTGGGAGCAGTCGGCTGTTCGCAGGGTGTAGAGGTAAGGGCTCTCAGGAGAGGGG  
 CACTTGAGTTTGGCTCGGCTGTGGGTGAAGTTGTTGGAGGTAGTCTTGGCGCCCACTGGT  
 TCCAGCATGTTGTTCCAGAGTGCATGGCCATCTCGGCATGCCCGGGTCTGAGAAGTGA  
 AAACAGTCCTCGGAGAAGAAGGTGAGGTGAGTGTCCCCTCTCT

SEQ ID NO:5  
 genbank|AW851123|AW851123 . (EST)  
 GTCCCCTGTCTTGATGGGCTGCATAGAGAGGTGCCCAGAGTCCTGGTCAACCTCGTGGAC  
 TTCTGAACCCCACTATCATGCGGCAGGTGTTCTGGGAAACCCAGACAAGTGCCAGTG  
 CAGCAGGCCAGCGTTTTGTGTAAGTGCCTTCTGACCCTGCGGGAGAACTCCCAAGAGCTA

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GCCAGGCTGGAGGCCTTCAGCCGAGCCTACCGGAGCAGCATGCGCGAGCTGGTGGGGTCA  
GGCCGCTATGACACGCAGGAGGACTTCTCTGTGGTGCTGCAGCCCTTCTTCCAGAACATC  
CAGCTCCCTGTCTTGGCGGATGGGCTCCCAGATACGTCCTTCTTTGCCCCAGACTGCATC  
CACCCAAATCAGAAATTCCACTCCCAGCTGGCCAGAGCCCTTTGGACCAATATGCTTGAA  
CCACTTGGAAGCAAAACAGAGACCCTGGACCTGAGAGCAGAGATGCCCATCACCTGTCCC  
ACTCAGAATGAGCCCTTCTGAGAACCCTCGGAATAAGAACTACACGTACCCCATCAAG  
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GGTCCAAT

SEQ ID NO:6  
embl|AA418228|HS1213659 . (EST)  
CCCAGCTGGCAGAGCCTTTGGACCAATATGCTTGAACCACTTGGAAGCAAAACAGAGACC  
CTGGACCTGAGAGCAGAGATGCCCATCACCTGTCCCACTCAGAATGAGCCCTTCTGAGA  
AACCCTCGGAATAGTAACTACACGTACCCCATCAAGCCAGCCATTGAGAACTGGGGCAGT  
GACTTCTGTGTACAGAGTGGAAGGCTTCCAATAGTGTTCACCTCTGTCCACCAGCTC  
CGACCAGCAGACATCAAAGTGGTGG

SEQ ID NO:7  
embl|AI952246|AI952246 . (EST)  
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TCTTCCCTCCGGCCACCTCTCTGCACCTCCAGACCACTGTCCCAGATGATGCCACCACA  
AGGCCGACTCCCGCTGCCACTGGGACAGCCAGTAGAGCACCTCGGGGGCTTCTTCAGCC  
TGGTCTGGGAGCAGTCGGCTGTTCCGCAGGGTGTAGAGGTAAGGGCTCTCAGGAGAGNG  
CACTTGAGTTGGCTCGGCTGTGGGT